RX100/BAX

Installation Guide

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RX100/BAX Version History

Version 1.5 Jan 09	Page numbers added to the Appendix pages
Version 1.3 10 April 08	Note about J6 link added
Version 1.2 06 Mar 08	Additional software to support the Bewator Solaris dome at 4800 Baud
Version 1.1 17 Dec 08	Updated drawings and new photos
Version 1 27 Nov 07	Support of JVC 676, Panasonic 850, Pelco P, Sensormatic RS422 & VCL Protocols

1. PRE-INSTALLATION CHECKS AND SAFETY PROCEDURES

UNPACKING

Check packaging - On delivery of the unit inspect the packaging for signs of damage. If damage has occurred, advise the carriers and/or the suppliers immediately.

Check contents - Unpack the unit carefully and check that all the items are present and correct. If any items are missing or damaged, contact your equipment dealer.

Retain packaging - The shipping carton is the safest container in which to transport the unit. Retain undamaged packaging for possible future use.

IMPORTANT SAFETY PRECAUTIONS

Read instructions - All relevant safety, installation and operating instructions should be read before attempting to install, connect or operate the unit.

Retain instructions - All safety, installation and operating instructions should be retained for future reference.

Heed warnings - All warnings on the unit and in any relevant safety, installation or operating instructions should be adhered to.

Cleaning - Unplug the unit from the power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.

Water and moisture - Do not expose the internal electronics of this unit to water or dampness; for example, in an unprotected outdoor installation, or in any area classified as a wet location. The unit as supplied conforms to ingress protection rating IP 67. This rating will be affected by any holes made in the enclosure. Cable entry points should be protected by the use of suitably rated glands and/or flexible conduit. It is not necessary to make further holes in the enclosure for mounting purposes, as mounting holes are provided at the corners of the enclosure outboard of the seal between enclosure and lid.

Accessories - Do not attach this unit to an unstable stand, bracket or mount. The unit may fall, causing serious injury to a person and serious damage to the unit.

Power sources - This unit should be operated only from the type of power source indicated on the manufacturer's label. If you are not sure of the type of power supply you intend to use, consult your equipment dealer or local power company. For units intended to operate from battery power or other sources, refer to operating instructions.

Power connector - This unit is equipped with coaxial power connector mounted at the edge of the PCB for low voltage power input. Do not attempt to alter this connector in any way.

Power cord protection - Power supply cords should be routed so that they are not likely to be trapped, pinched or otherwise damaged by items in close proximity to them, whether inside the unit or outside it. Particular attention should be paid to cords at plugs, connection units and the point of exit from the unit.

Overloading - Do not overload outlets and extension cords, as this can result in fire or electric shock.

Object and liquid entry - Never push objects of any kind into the unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill liquid of any kind on or inside the unit.

Servicing - Servicing of the unit should only be undertaken by qualified service personnel, as opening or removing covers may expose you to dangerous voltages or other hazards.

Damage requiring service - Servicing by qualified personnel should be carried out under the following conditions:

(a) When the power supply cord or plug is damaged
(b) If liquid has been spilled or objects have fallen into the unit
(c) If the internal electronics of the unit have been exposed to rain or water
(d) If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage
(e) If the unit has been dropped or the enclosure is damaged
(f) If the unit exhibits a distinct change in performance; this indicates a need for service

Replacement parts - If replacement parts are required, ensure that only replacement parts recommended by the product manufacturer are used.

Safety check - Upon completion of any service or repairs to the unit, safety checks should be performed to ensure that the unit is in proper operating condition.

Pre-installation checks - It is recommended that the unit be bench tested prior to installation on the site.

Safety during installation or servicing - Particular care should be taken to isolate the dome in order to prevent operation while engineering work is being carried out on the RX100.

Adhere to safety standards - All normal safety precautions as laid down by British Standards and the Health and Safety at Work Act should be observed.

WARNING

TO PREVENT DANGER OF FIRE OR SHOCK, DO NOT EXPOSE THE INTERNAL COMPONENTS OF THIS EQUIPMENT TO RAIN OR MOISTURE.

This symbol is used to warn the user that there are sufficiently high voltages within the enclosure to constitute a risk of electric shock.

The “exclamation point” symbol is used to alert the user of this equipment to important operating and maintenance instructions in the literature accompanying the appliance.

2. INTRODUCTION

GENERAL

The RX100 telemetry interface is designed to allow control of a variety of integrated dome cameras using Baxall's range of up-the-coax telemetry transmitters. (See appendix A for a complete list of supported domes.)

The RX100 interface is supplied in an IP67 rated enclosure. It will be necessary to make suitable holes in the enclosure to permit cable entry and exit. Adequately rated cable glands and or flexible conduit should be used at all times to avoid compromising the protection afforded by the enclosure as supplied. Any holes made in the enclosure for any other purpose should be sealed with a non-hardening waterproof sealant, taking care to ensure that the internal electronics are not contaminated.

RX100 TECHNICAL SPECIFICATION

Power Requirements: RX100 9-12V ac/dc – plug mounted PSU provided
RX100/24 – 24V ac or 230V ac

Current Consumption: RX100 - 100mA @ 12V dc max
RX100/24 - 630mA @ 230V ac max

Features:
- Serial data output 2 wire RS485/RS422
- 4 alarm inputs
- 1 N/C alarm output
- Up to 16 preset positions can be stored within the RX100
- Relay capable of switching 1Kw of lighting

Engineering Facilities:
- Unit auto-tunes to the coaxial telemetry signal
- LED readout for continual system status
- Video launch amplifier provided with Gain and Lift controls
- Colour coded cage clamp terminals. Mains terminal connections: Live, Neutral, Earth and Low Voltage

Telemetry Signal
- up-the-coax (max distances, 250m of RG59 or 500m of CT125)

Video Input: 1V p-p 75Ω terminated input via BNC socket
Video Output: 1V p-p to 4v p-p 75Ω impedance via BNC socket

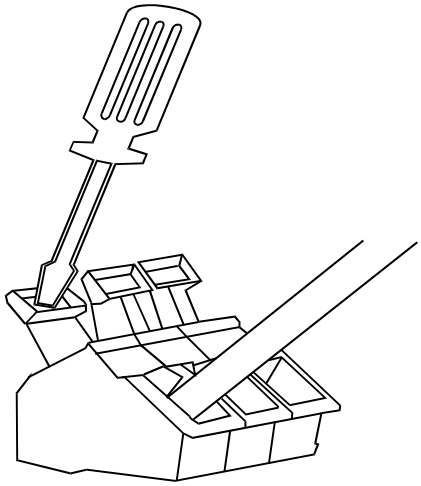
Up to 16 full scene preset positions can be stored within the interface depending upon the model of dome.

Dimensions (external):	**RX100/WBX**	**RX100/24/WBX**
Width:	190 mm	190mm
Length:	280 mm	380mm
Height:	130 mm	130mm
Weight:	1Kg	3.6Kg

Temperature range: -10°C to +40°C

CABLE CONNECTION METHOD

Fig. 1: cage clamp connectors



The cage clamp PCB terminal block is a simple to use method of attaching cables to PCBs quickly and easily. Prepare cables as follows:

- Use only cable between 0.08 and 2.5 mm²
- Strip the cable to a length of 5 - 6 mm (0.23 in)

The correct method of attachment is as follows:

1. Press down the relevant terminal block lever with a suitable screwdriver
2. Insert wire
3. Remove screwdriver

The procedure for detaching wires is the reverse of the 3 attachment steps, ensuring that **power is disconnected** before starting.

3. INSTALLATION

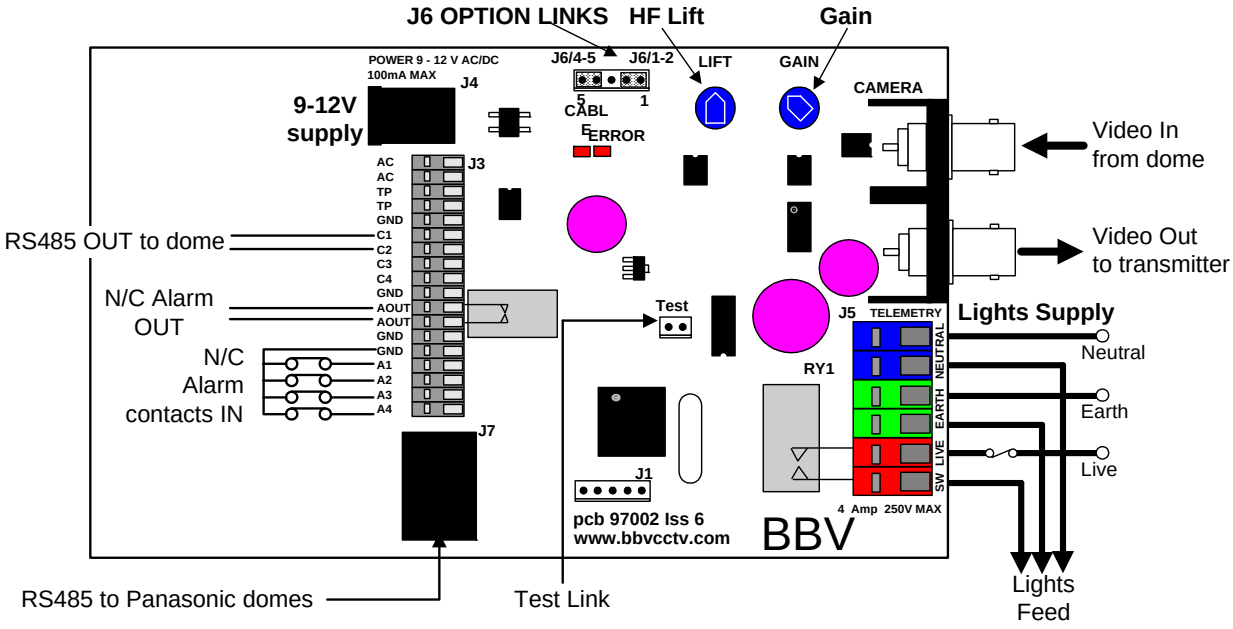
OPERATING VOLTAGE

The RX100 requires all connections to the PCB to be made by the installer, and via terminal blocks or by plug and socket. These connections are: power in, video in, video out, and serial data to dome. In addition connections for alarm in, alarm out and lights if required are provided. See Fig.2 below for correct connections.

The RX100 is supplied pre-configured to suit the application for which it is intended, i.e. to control an integrated dome camera.

IMPORTANT NOTE – If link J6/4-5 is removed it must be refitted to J6/3-4 position or the RX100 will assume it is still fitted.

Fig. 2 RX100 Iss6 PCB connections



Function	Connector	Type	
Power In	J4	2.1mm coaxial	
or	J3/AC-AC	Grey terminals	
Video In	CAMERA	BNC SOCKET	
Video Out	TELEMETRY	BNC SOCKET	
Serial to dome	J3/C1-C4-GND	Grey terminals	
or	J7	FCC68	(Fitted for Panasonic versions)
Alarm 1 contact in	J3/A1-GND	Grey terminals	(optional if alarm input required)
Alarm 2 contact in	J3/A2-GND	Grey terminals	(optional if alarm input required)
Alarm 3 contact in	J3/A3-GND	Grey terminals	(optional if alarm input required)
Alarm 4 contact in	J3/A4-GND	Grey terminals	(optional if alarm input required)
Alarm contact out	J3/AOUT-AOUT	Grey terminals	(optional if alarm input required)
Lighting relay	J5	Coloured terminals (optional if lights control required) (clean contact between orange connectors)	

4. SETUP

DIAGNOSTIC AIDS

Two red LEDs and one Green LED are mounted on board to give simple system status information. Their functions are as follows:

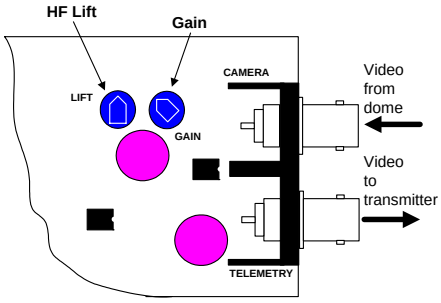
Cable LED		
Regular Blinking	-	Telemetry and video signals are OK
Blinking but mainly ON	-	No Telemetry from the transmitter
Blinking but mainly OFF	-	No video from the camera
Error LED		
On	-	Telemetry transmission error
Both LEDs		
Off	-	No power or major PCB fault
Data LED (Iss PCB 4 onwards only)	-	Will flash on and off very fast when data is being sent to the dome
Test Link	-	Is used to confirm correct operation of the RX100 and dome and also that the RS485 connection is correct. Shorting the link after the RX100 is powered up will cause the dome to pan left and zoom in. Removing the link will stop the pan left and will zoom out the lens. This is dependant on dome type.

All BBV equipment is designed to auto-tune and compensate for any discrepancies in the transmitted telemetry signal; there are no further adjustments that need to be made.

VIDEO LAUNCH AMPLIFIER AND CABLE LENGTH COMPENSATION

The interface features a video launch amplifier with two variable controls situated close to the BNC connectors: Lift and Gain. These are pre-adjusted for a cable distance of 500m of CT125, and are adjustable to compensate for video detail or signal losses if and when longer or shorter cable lengths are used to connect the telemetry transmitter to the interface.

Fig. 3 Launch Amplifier



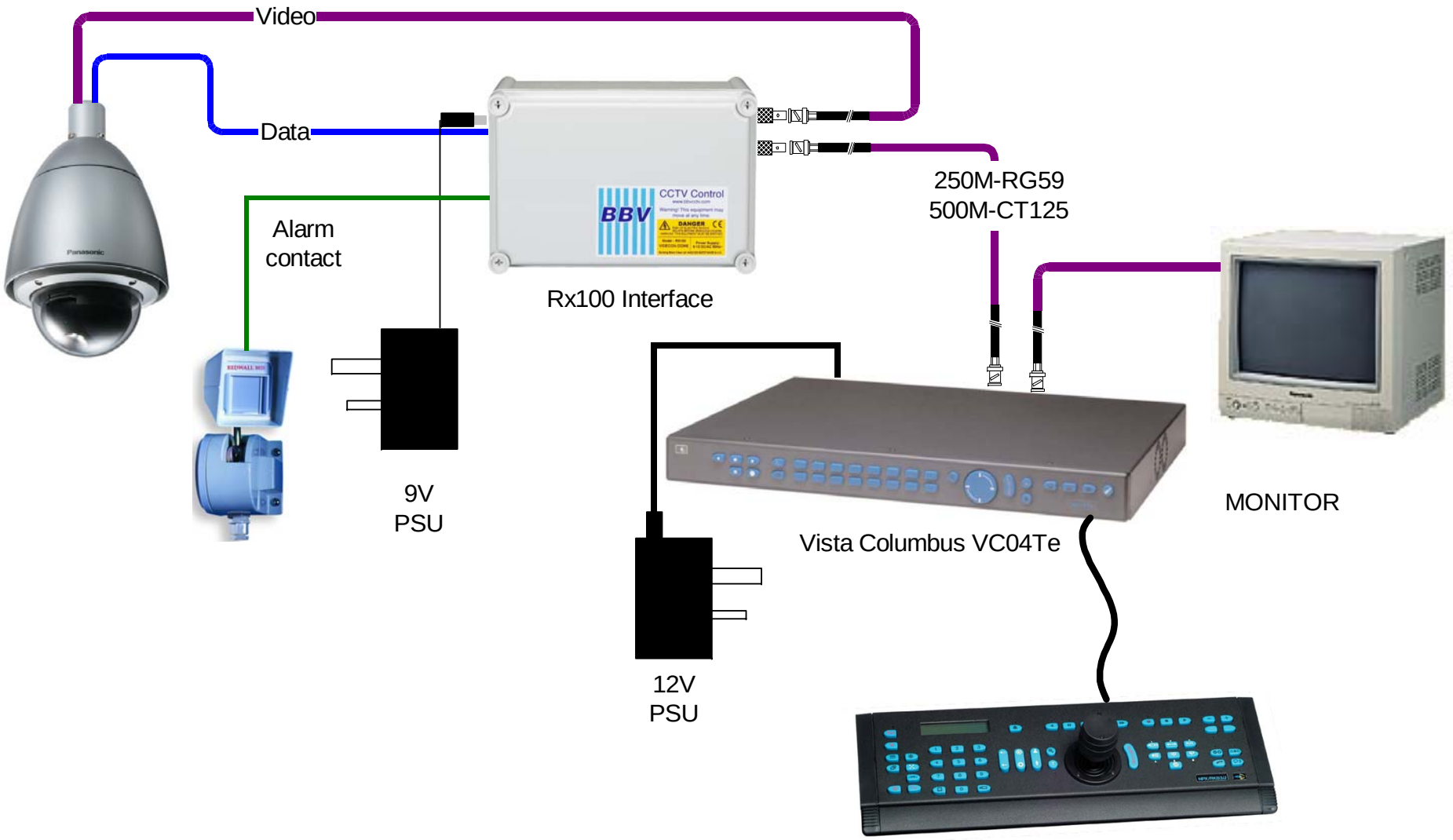
The purpose of each control is:

GAIN varies the overall signal level.

LIFT boosts the high frequency component of the video signal. If the high frequency component is too low, picture appears 'washed out' and lacking detail.

Default position adjusted for 500m of CT125
For shorter cable lengths, turn the Gain control anti-clockwise until 1V p-p / 300mV Sync is present at the telemetry transmitter. For longer cable lengths, turn the Gain control clockwise until 1V p-p / 300mV Sync is present at the telemetry transmitter.

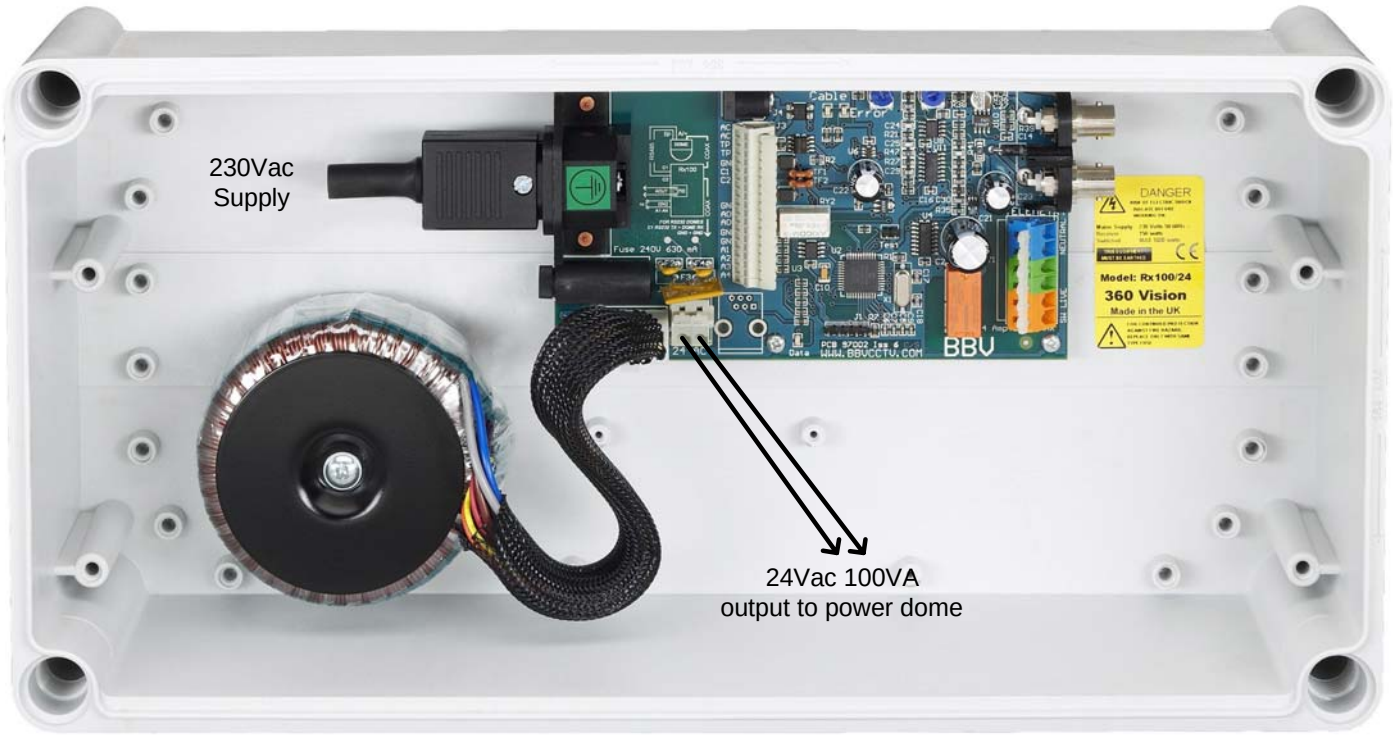
Example System



BBV RX100/24 Supply Additional information *(iss. 6 pcb)*

The RX100/24 can be powered from either 230V ac or 24V ac. The diagrams below shows the connections that should be made for each supply voltage. Please note that when powered from 24V ac the 230V ac terminals will be at mains voltages. To prevent the risk of shocks the fuse must be removed from the fuse holder and no connections made to L and N. The 24V ac supply must be fused with a 315mA to protect the supply wiring.

Fig 9. RX100/24 iss. 6 pcb Connection details when operating from a 230V ac supply.



Appendix A - Dome addendums & connection details

Bewator Solaris Dome (Pelco P at 4800 Baud)	12
JVC TK-C655B/675B/676	13
Panasonic WV-CS850/860/960	14 - 15
Pelco Spectra dome & Esprit head (P protocol)	16
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Bewator Solaris Dome

Addendum to manual for the following dome:

Bewator Solaris (P-mode 4800 Baud RS485 protocol)

RX100 software BB1V1

Application Notes

Variable speed Pan/Tilt
Zoom/Focus, Auto focus
16 full scene presets
2 preset patrols
4 alarm inputs driving to preset 1 - 4

Advanced Features	Vista Columbus VC04Te	Baxall ZT6
Display dome menu	Goto Preset 25	N/A (supports 8 presets only)
Enter within menu (Goto Preset 3)	Goto Preset 26	N/A (supports 8 presets only)

Menu access:
Use 'Goto Preset 25' to display menu
Navigate using the joystick
Press 'Goto Preset 26' to select

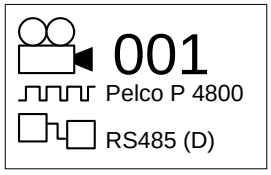
RS485 control of dome:
Data rate, 4800 Baud, no parity, 8 data bits, 1 stop bits

Connection details:

Dome Telemetry	Description	RX100
B-	RS485 (B) input	J3/C1
A+	RS485 (A) input	J3/C2

Notes:
The alarm output relay opens for approx 5 seconds upon power up. This can be used to signal power loss, etc.

Dome settings
Use the LCD display inside the dome receiver box to set up the control protocols and data speed.
Set it to Pelco P 4800 as shown below:



Link J6
Link J6/4-5 is used to enable 5 minute datum time to start preset patrol:
Link fitted = datum disabled
Link removed = datum enabled

JVC TK-C655B/675B/676

Addendum to manual for the following dome:

JVC TK-C655B/675B/676 combination cameras

RX100 software BJ2V3

Application Notes

Variable speed Pan/Tilt
Zoom/Focus, Auto focus can be enabled/disabled from the dome menu
16 Full scene presets.
Slow patrol or dome autopan from controller AUTOPAN key
4 alarm inputs driving to preset 1 - 4

Additional commands:

TK-C676	Vista Columbus VC04Te	Baxall ZTX6
OPEN MENU and BACK (Twice)	Goto Preset 25 (x2)	N/A (Supports 8 presets only)
SET	Goto Preset 26	N/A (Supports 8 presets only)

RS485 control of dome using the following connections:

RX100	Description	Dome connection
J3 – C1	TX-	CONTROL RX- (D)
J3 – C2	TX+	CONTROL RX+ (C)

Menu access:
Press ‘Preset 25’ twice to display the dome menu
Use the joystick to navigate the dome menu
Press ‘Goto Preset 26 to send a SET command to the dome
Press ‘Goto Preset 25’ twice while the menu is displayed to go BACK

Notes:
The alarm output relay opens for approx 5 seconds upon power up. This can be used to signal power loss, etc.

Camera switch settings:
MACHINE ID – set both rotary switches to ‘0’
8 way DIL switch, all OFF apart from 8 which should be ON to enable the RS485 termination, point-to-point, simplex.

On screen display of preset position, HOME - P16 or MANUAL during manual control.
The on screen display can be enabled/disabled using dome switch SW3:
ON = Display off
OFF = Display on

Link J6

J6: Autopan

J6/4-5:
Fitted (default) = Performs a slow patrol between programmed presets when AUTOPAN pressed
Removed = Sends autopan start to the dome

Panasonic WV-CS850/860/960

Addendum to manual for the following domes:

Panasonic WV-CS850 / 860 / 960

RX100 software BP1V1

Application Notes

Variable speed Pan/Tilt
Zoom/Focus, Auto focus, Iris Open/Close
16 full scene presets
2 preset patrols
4 alarm inputs driving to preset 1 – 4
Autopan/Patrol learn play using autopan key

Advanced Features	Vista Columbus VC04Te	Baxall ZTX6
ENTRY/EXIT dome menu	Goto preset 25	N/A (supports 8 presets only)
SET (select menu item)	Goto preset 26	N/A (supports 8 presets only)
ESC (back to previous menu)	Goto preset 27	N/A (supports 8 presets only)

Accessing the dome menus:
Press 'Goto Preset 25' to Enter Menu.
Use Pan/Tilt to highlight item.
Press 'Goto Preset 26' to select menu item.
'Goto Preset 27' is used to ESCAPE back to previous menu.

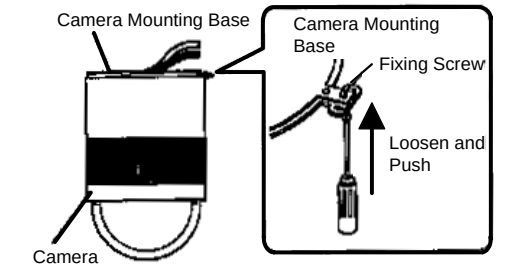
The internal PATROL can be LEARNED using the dome menu. Setting the AUTO PAN KEY to PATROL will allow the patrol to be PLAYED by pressing AUTOPAN on the controller.

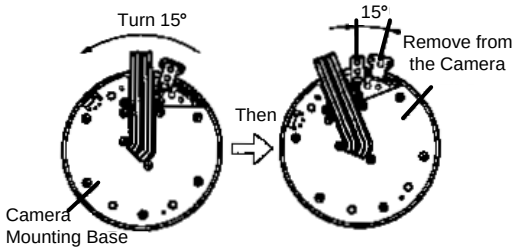
RS485 control of dome:
Connect dome FCC-68 plug into J7 of RX100.
If the dome cable requires extending, connect cores as follows:

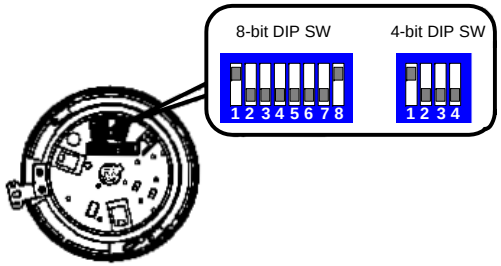
Dome cable	Description	RX100
Yellow	Data-	J3/C1
Green	Data+	J3/C2

Notes:The alarm output relay opens for approx 5 seconds upon power up. This can be used to signal power loss etc

Dome switch settings: The following procedure must be followed to ensure the correct 4 wire RS485 Protocol, Baud Rate & Address







Three switch settings are used to configure the dome to work with BBV Rx100 units. For each switch setting, the dome must be de-powered and removed from the base. The switches will be set as shown below. Install back on the base and apply power. NOTE: THIS MUST BE CARRIED OUT FOR EACH SWITCH SETTING.

Stage 1 Protocol Selection (Panasonic's CONVENTIONAL).

Stage 2 Parameter Selection (19200 8 NONE 1).

Stage 3 Address Selection (ADDRESS 1).

	8-bit DIP SW	4-bit DIP SW	
Stage 1	1 2 3 4 5 6 7 8	1 2 3 4	CONVENTIONAL 4 Wire Full Duplex Terminated
Stage 2	1 2 3 4 5 6 7 8	1 2 3 4	19200 8 NONE 1 4 Wire Full Duplex Terminated
Stage 3	1 2 3 4 5 6 7 8	1 2 3 4	ADDRESS 1 4 Wire Full Duplex Terminated

Pelco Spectra

Addendum to manual for the following dome:

Pelco Spectra (P-mode RS485 protocol)

Rx100 software BP2V1

Application Notes

Variable speed Pan/Tilt
Zoom/Focus, Auto focus
16 full scene presets
2 preset patrols
4 alarm inputs driving to preset 1 - 4
Dome Pattern definition and playback

Advanced Features	Vista Columbus VC04Te	Baxall ZT6
Display dome menu	Goto preset 25	N/A (Supports 8 Presets Only)
Enter within menu	Goto preset 26	N/A (Supports 8 Presets Only)
Pattern define start	Goto preset 27	N/A (Supports 8 Presets Only)
Pattern define stop	Goto preset 28	N/A (Supports 8 Presets Only)

How to record a Pattern:
Direct the camera to the required starting position.
Press Goto Preset 27. The dome will now record pan/tilt and lens movement up to a time limit.
To stop the recording, press Goto Preset 28.
To play the recorded Pattern, press the AUTOPAN key only. The dome will repeatedly run the Pattern until either the joystick is moved or an alarm occurs.

Menu access:
Press 'Goto Preset 25' to display menu.
Navigate using the joystick.
Press 'Goto Preset 26' to select.
Return to home: Can be programmed from the Dome menu.

RS485 control of dome. Data rate, 9600 Baud, No parity, 8 Data bits, 1 Stop bits

Connection details:

Dome	Description	RX100
RX-	RS485 (B) input	J3/C1
RX+	RS485 (A) input	J3/C2

Notes:
The alarm output relay opens for approx 5 seconds upon power up. This can be used to signal power loss, etc.
Check with the DM multiplexer manual for exact procedure for entering * commands.

Dome settings: Select dome address 1, P-MODE PROTOCOL and 9600, N, 8, 1.

Link J6:
Link J6/1-2 is used to select the function driving the Esprit AUX outputs.

Function link fitted	Aux number (Link fitted)	Aux number (Link removed)
Lights	1	2
Wiper	2	1
Washer	3	3

Link J6/4-5 is used to enable 5 minute datum time to start preset patrol.
Link fitted = datum disabled and link removed = datum enabled.

Sensormatic Speed dome

Addendum to manual for the following domes:

Sensormatic Speed dome

Rx100 software BS3V1

Application Notes
Variable speed Pan/Tilt
Zoom/Focus, Auto focus, Iris Open/Close
7 full scene presets
4 alarm inputs driving to preset 1 – 4
Pattern 1 define – play using Autopan key

Advanced features	Vista Columbus VC04Te	Baxall ZT6
Start/Stop Pattern 1 Definition*	Goto preset 25	N/A (Supports 8 presets only)
Dome menu	Goto preset 28	N/A (Supports 8 presets only)

*Press AUTOPAN to Run Pattern1

RS485 control of dome: 4800 Baud, No parity, 8 data bits, 2 stop bits.
IMPORTANT:
Dome settings: Select dome address 01 or 001.
Communications must be 4800, N, 8, 2 – RS422, **NOT SensorNet.**

The interface software is based on 1997 protocol and has been tested with Ultradome IV, Ultradome VI and original Speeddome.

Dome cable	Description	RX100
RS422 IN- / Data In-	Data- (B)	J3/C1
RS422 IN+ / Data In+	Data+ (A)	J3/C2

Notes:
The alarm output relay opens for approx 5 seconds upon power up. This can be used to signal power loss, etc.

Accessing the dome menus.
Press Goto Preset 27 to Enter Menu.
Use Pan/Tilt functions to navigate through menu structure.
Please refer to individual dome manual for exact operation of menu.

Link J6: Datum mode
Link J6/1-2 used to enable/disable datum mode to start preset patrol:
Link fitted = datum disables
Link removed = datum enabled, start preset patrol after 60 seconds of inactivity

VCL TP Protocol

Addendum to manual for the following domes:

VCL TP protocol Microsphere/Orbiter range.

Rx100 software BV1V1

Application Notes

Variable speed Pan/Tilt
Zoom/Focus, Auto focus following a Zoom In/Out
16 full scene presets
Fast Preset Tour. Started by pressing 1 Patrol
Slow preset tour. Started by pressing AUTOPAN
5 minute datum/park driving to preset 8 disabled by removing link J6/4-5

Additional commands:
AUTOPAN: Pressing the AUTOPAN key will run the domes preset tour at slow speed between the patrol 1 preset positions.

Advanced Features	Vista Columbus VC04Te	Baxall ZT6
180° pan flip	Goto Preset 25	N/A (Supports 8 presets only)

The dome and RX100 are linked using RS485 for control and video for the camera signal:

RX100	Description	Dome connection
J3 – C1	TX-/B	D-
J3 – C2	TX+/A	D+

Notes:
Dome Address
The dome address must be set at 1 for all the cameras that are controlled using a RX100.
With an Orbiter Gold, set the address to 1 with all switches of DILSW2 ON. Select VCL protocol with all switches of DILSW1 OFF. Check with the dome manual if you have any doubts.

The alarm output relay opens for approx 5 seconds upon power up and following any active alarm input.

If the slow preset tour is running, start patrol 1 & 2 is inhibited. The dome will be driven to a preset following an alarm activation. 60 seconds after alarm, the tour will restart. A manual goto preset and lens control will stop the tour leaving the AUTOPAN led on until the next manual pan command.

Link J6: Datum Park mode
A datum/park mode is offered that drives the dome to preset 8 following 5 minutes of inactivity. This can be disabled by removing the link fitted across J6/pin 4 & 5.

Appendix B - Trouble shooting guide

Symptom: No video from interface

Possible causes:
Camera is not powered or not connected to ‘CAMERA’ BNC on interface.
Check power and cabling.
Interface is not powered.
Check power.
Video out not connected to ‘TELEMETRY’ BNC on interface.
Check cabling.
If the after following the above check list video still not present then remove both BNCs from the interface and connect together using a female to female barrel connector to check video path from camera to control point.

Symptom: No camera control but lights relay operates with LIGHTS key on transmitter.

Possible causes:
Dome data cable is not connected correctly.
Check cabling, most commonly due to data cables swapped.
Dome configuration switches if fitted not set correctly.
Check configuration.

Symptom: No camera control and lights relay not operating.

Possible causes:
Interface not seeing telemetry signal.
Check that telemetry is present on video cable using either oscilloscope or adjust v.hold on monitor to view frame blanking period and check for black/white band. If missing, power down/up the transmitter. Should this fail, swap video between working and non-working channels.
Earth loops can interrupt telemetry operation if sufficiently severe.
If hum bars are apparent, fit isolation transformer to coaxial cable.
Check cable and error LEDs on interface.
See SETUP section earlier in this manual for correct indication.

If the fault remains unresolved please contact the BBV Technical Department on either:

Tel: 01323 842727
Tel: 01323 444600

Alternatively email support@bbvcctv.com or visit our website www.bbvcctv.com

Extend your BBV Warranty from 12 months to 3 years

As of the 1st September 2008 BBV have offered our customers the opportunity to extend the standard 12 month warranty to 3 years.

You must register for the extended warranty within 12 months of the date of manufacture.

How to register for the 3 year warranty

Registering for the new, longer 3 year warranty term is quick and easy.

Either:

Complete the warranty application card that comes in the box with your BBV product, and return it FREEPOST to BBV:

BBV 3 Year Warranty

If this card is returned with the serial number of the product and the Installation company details BBV will extend the warranty period from 12 Months to 36 Months.

☐ Number of Units, ☐ Start Serial No. ☐ Final Serial No.

Contact Name._____

Company Name._____

Phone Number._____

Site Name._____

Address 1._____

Address 2._____

Address 3._____

Post Code._____

e-mail address._____

Do you read. PSI MAGAZINE SC

Please could you send me information especially on:

- ☐ Rx100s
- ☐ Rx45x & Rx55x
- ☐ FBM Video Matrices
- ☐ Tx1500 Video Matrices
- ☐ Starcard & Starcard Converters
- ☐ BBV Quad
- ☐ Pick A Point

☐ I do not require any other further product information,

Please refer to WWW.BBVCCTV.COM for terms, conditions & exclusions

VAT Reg. No. 621758439 Registered in England No. 2852921 Registered office: 17 Apex Park Diplocks Way Hailsham East Sussex UK BN27 3JU

Or alternatively:

Register online at: www.bbvcctv.com
Simply enter your details on the 'Warranty Cover' page.